

# END-OF-FIELDWORK MANAGEMENT SUMMARY

*Terrestrial Archaeological Resources Testing (Phase II)  
at Archaeological Site A09.117.000155 (Area  
NDCA-a2) on National Park Service Property,  
River Section 3, Hudson River PCBs Superfund Site*

prepared for



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# **End-of-Fieldwork Management Summary for Archaeological Area NDCA-a2, Site A09117.000155 (SARA00139), Adjacent to CU 80**

## **Introduction**

On behalf of the General Electric Company (GE), as part of the 2013 terrestrial archaeological field tasks at the Hudson River PCBs Superfund Site, URS Corporation (URS) performed a Phase I survey and Phase II testing at site A09.117.000155 within the archaeological area designated as NDCA-a2, which is adjacent to dredge Certification Unit (CU) 80 and is located partially on National Park Service (NPS) property just south of Schuylerville in Saratoga County, New York. This document provides a summary of fieldwork completed at the site. Data analysis is currently underway, and a more detailed report will be produced detailing all results of the work.

## **Background**

Archaeological site A09.117.000155 was first recorded with the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) in 2012 by The Louis Berger Group, Inc. (Berger) as a result of field studies performed on behalf of the NPS (Penney et al. 2013). The NPS has assigned this site an internal site number, SARA00139.

In 2011 and 2012, Berger performed an archaeological survey and trenching in various floodplain locations under NPS ownership as part of the Saratoga National Battlefield. In 2012, Berger's work included Area J, a fallow field just south of the General Philip Schuyler House on the south edge of Schuylerville (**Figure 1**). The NPS conducted a metal detector survey of portions of the same field just prior to Berger's work (Penney et al. 2013:80, 86, Figure 40).

As reported by Penney et al. (2013), Berger's work at site A09.117.000155 consisted of excavation of 27 shovel test pits (STPs) and three mechanical trenches. Shovel testing included 11 interval tests and 16 tests targeting metal detector "hits" from the NPS work. Twenty-three of the 27 STPs produced artifacts including both prehistoric and historic era items. The mechanical trenches also produced artifacts. In total, Berger's work recovered 164 artifacts—123 prehistoric and 41 historic.

Berger reported that soils across the site were relatively uniform in terms of the horizon sequence, with variation only in the depths/thicknesses of the various strata and in the number of plowzones present (about half of the STPs exhibited two plowzones overlying subsoil). As will be discussed below, URS's work at the site largely confirms these results, but can add additional information and refinement to the nature of the upper soil horizons.

Berger's work at the site was widely spaced and not designed to determine the exact boundaries of encountered cultural resources. Therefore, no formal site boundary was defined as a result of Berger's work. Rather, Berger stated that, "based on the limited testing to date, the entire field should be considered an archaeological site.... Additional study will be required to identify site boundaries and to define the limits of historic and prehistoric artifact concentrations" (Penney et al. 2013:100-102).



**Figure 1. Map Depicting Location of 2012 Fieldwork in Area J by Berger (modified from Penney et al. 2013:Figure ).**

### **URS' 2013 Fieldwork**

In July 2013, URS performed a Phase I archaeological survey in two segregated locations adjacent to CU 80 in an area designated as archaeological area NDCA-a2 (**Figure 2**). The northern portion is located on NPS property (and consisted of fallow field at the time of survey); the southern portion is located on private property (and consisted of a corn field at the time of survey). At the time of the survey, historic artifacts were recovered from STPs at the northern end of the northern location on NPS property; and two prehistoric items were collected from the surface in the southern location on private property, although all STPs in the southern portion were sterile of cultural materials. The results of this survey were presented in URS's *End-of-Fieldwork Summary Report; Evaluation of Phase 2 Dredge Area Below Northumberland Dam (River Section 3)* (Fieldwork Summary Report; URS 2013a) and *Addendum No. 1 to*

*Terrestrial Archaeological Resources Survey Work Plan for Phase 2 Dredge Area Below Northumberland Dam (River Section 3)* (Work Plan Addendum; URS 2013b). The Fieldwork Summary Report termed the northern historic scatter as an archaeological site (temporarily designated as NDCA-a2-1) and the southern two prehistoric surface items as an isolated find. In the Work Plan Addendum, based on discussions with EPA, URS proposed Phase II testing at site NDCA-a2-1. Following EPA approval, URS carried out that testing in September 2013. Test excavations consisted of additional STPs as well as excavation of two test units (TUs), as described further below. Subsequent analysis of both URS's and Berger's data warrants combining both the resources found in the northern portion of area NDCA-a2 and those in the southern portion of that area into a single archaeological site, A09.117.00015, that exists both on NPS and private properties.

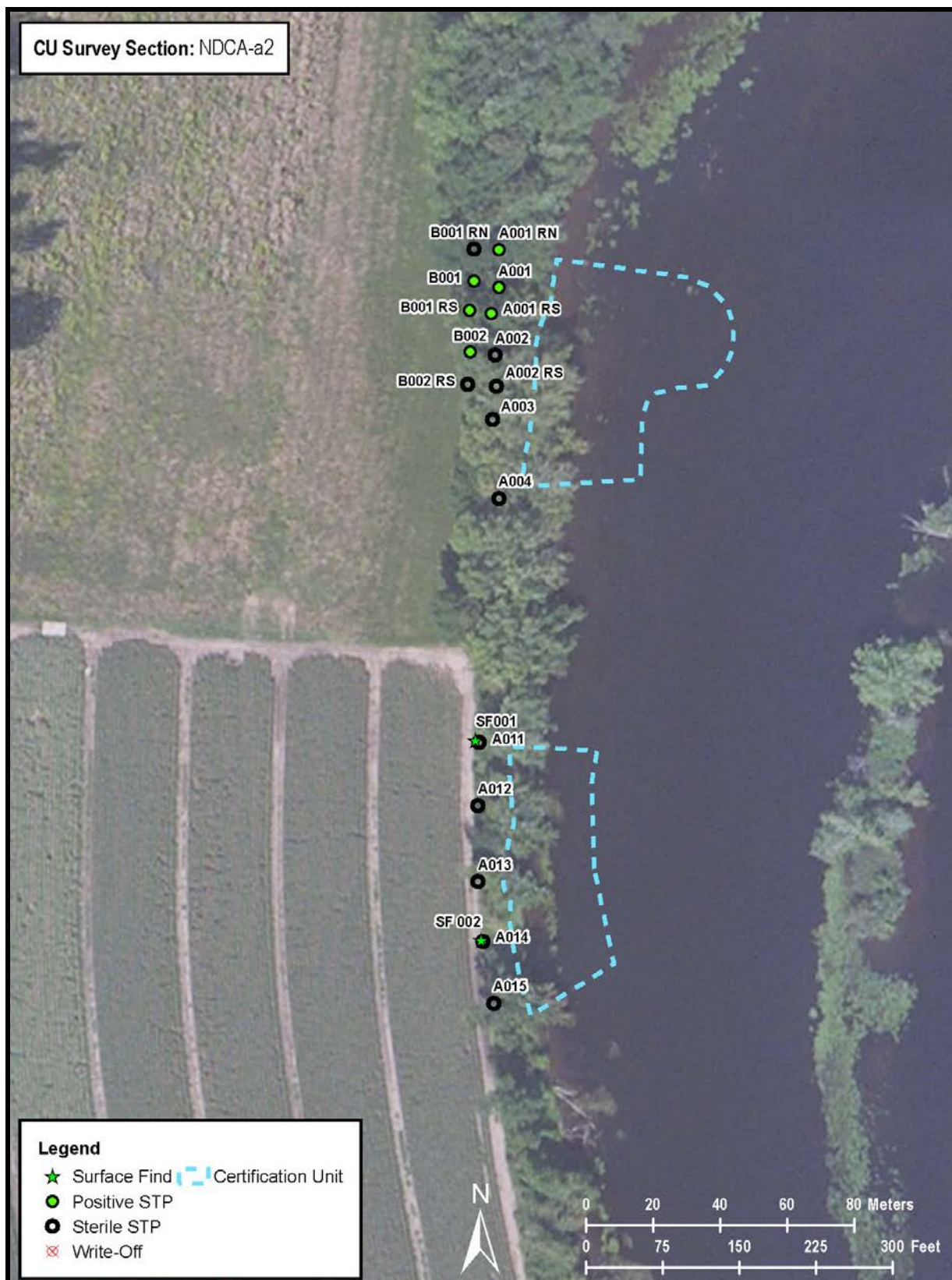


Figure 2. Map of URS' 2013 Phase I Results in Survey Area NDCA-a2 (CU 80 – shown as blue-dashed polygons).

However, the following discussion focuses on the northern (NPS) part of the site since no subsurface artifacts were recovered from the private property to the south. The forthcoming report will provide details on the entire site including the private, southern portion.

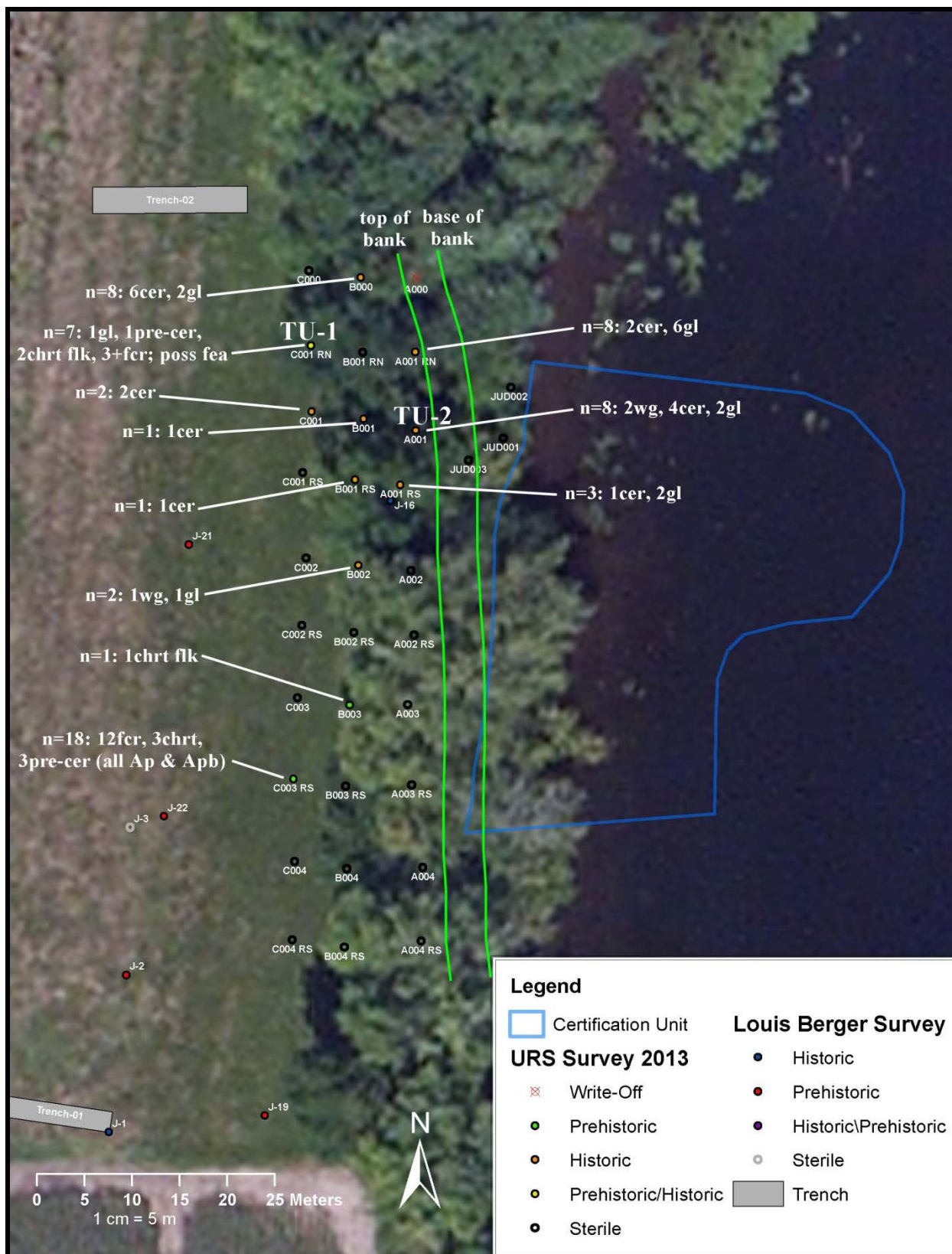
*Shovel Test Pits.* Between the Phase I survey and Phase II testing, a total of 33 STPs were excavated, 12 in Phase I and 21 in Phase II. Their locations are shown on **Figure 3**. These were laid out as three transects of 10 STPs each (n=30), with an additional three judgmental STPs on a low terrace immediately adjacent to the CU and waterline of Hudson River. The STPs on each transect were excavated at 7.5-meter (m) intervals, and the intervals between transects were 7.5 m. The grid of STPs extends approximately 8 m north of CU 80, 10 m south of CU 80, and 25 m west of CU 80.

Of the 30 grid STPs, 11 produced artifacts and the remaining 19 were sterile of cultural materials. Artifacts from these STPs were largely recovered from the first two strata (both A-horizons) with one STP (C-01-RN) producing prehistoric fire-cracked rock (FCR) from the top of the B-horizon. The FCR from the B-horizon of STP C-01-RN provided evidence of a potential prehistoric feature due to the presence of additional FCR fragments that were left *in situ* in the STP.

All three of the judgmental STPs on the low terrace encountered bedrock at approximately 65 centimeters (cm) below ground surface (bgs). Two of these STPs produced modern trash (cellophane wrapper fragments) from the base of the STPs and the third produced a few historic items from a colluvial deposit at the top of the STP.

*Test Units.* Two TUs were excavated at site A09.117.000155 during URS's 2013 work. Both TUs were 1 m (east-west) by 2 m (north-south) in dimension. The TUs were horizontally segregated into two 1-m-square halves and were vertically segregated into 10-cm arbitrary levels within soil strata. TU 1 was placed with STP C-01-RN within the south-central part of the unit (approximately 20 m west of top of bank) to investigate the possible feature encountered in that STP. TU 2 was placed adjacent to STP A-01 and the top of the bank to investigate the area of the site that had produced the most historic artifacts, as well as to obtain data near the edge of the top of the river bank and thus near the CU.

Within TU-1, soils included three A-horizons (Strata I-III), a B-horizon (Stratum IV), a thin Ab-horizon (Stratum V), and a second B-horizon (Stratum VI). The upper three A-horizons include an Ap (Stratum I), a buried A horizon that may be a buried plowzone (Stratum II) and a clearly unplowed buried A horizon (Stratum III). Excavation levels 1-3 were excavated through Stratum I; levels 4-5 were excavated through Stratum II, levels 6-8 were excavated through Stratum III; level 9 was excavated in Stratum IV; level 10 was excavated through Stratum IV and into Stratum V. Below level 10, a roughly 50-cm-square STP-like excavation was extended to a total depth of 150 cm bgs, encountering Stratum VI. Soil color and textures are provided in **Table 1**. A photograph of the east wall of TU 1 is provided in **Figure 4**.



**Table 1. Soil Data for Test Unit 1 at A09.117.000155.**

Stratum	Horizon	Depth (cm at SE corner)	Munsell Color	Soil Texture	Comments
I	Ap	0-34	Vry. Dk. Gray Brown 10YR 3/2	Sandy silt	Historic and Prehistoric artifacts
II	Ab (p?)	34-53	Dk. Yellowish Brown 10YR 3/4	Sandy silt	Prehistoric Artifacts
III	Ab1	53-85	Vry. Dk. Brown 10YR 2/2	Sandy silt	Low density of prehistoric artifacts at top of stratum (ca. 53-60cm); sterile lower 2/3rds of stratum
IV	B1	85-97	Dk. Yellowish Brown 10YR 4/4	Fine sandy silt	Feature 1 (rock/FCR cluster) ca. 85-90 cm; otherwise sterile
V	Ab2	97-110	Dk. Yellowish Brown 10YR 3/4	Sandy silt	Sterile
VI	B2	110-150	Dk. Yellowish Brown 10YR 4/4	Fine sandy silt	Sterile



**Figure 4. Photograph of East Profile of TU 1 at A09.117.000155.**

**Table 2** provides field counts for the artifacts recovered from TU 1. In general, historic and prehistoric items were recovered from Stratum I, only prehistoric items were recovered from Stratum II, and two prehistoric items were recovered from the upper portion of Stratum III (although Stratum III was largely

sterile). A cluster of FCR and other rocks was encountered in the upper portion of Stratum IV, termed Feature 1. No other cultural materials were present in Stratum IV, and Feature 1 was approximately 20 cm below the last recovered artifacts. Strata V and VI were sterile.

**Table 2. Artifacts from TU 1 by Level and Stratum.**

Level	Stratum	Horizon	Depth (cm at SE corner)	Artifacts
1	I	Ap	+2-10	2 hist ceramic, 1 brick frag; 1 chert flake
2	I	Ap	10-20	1 cellophane wrapper (only item recovered from level)
3	I	Ap	20-32	2 hist ceramic, 3 glass, 2 0.22-caliber brass casings; 2 chert flakes
4	II	Ab (p?)	32-40	3 FCR, 3 chert flakes, 1 chert PP/K tip fragment
5	II	Ab (p?)	40-51	4 FCR, 26 chert flakes, 6 prehist ceramic
6	III	Ab1	51-60	1 chert flake, 1 prehist ceramic
7	III	Ab1	60-72*	-
8	III	Ab1	72-83*	-
9	IV	B1	68-85*	Feature 1 FCR/rock
10	IV/V	B1 / Ab2	85-95	-
STP	V/VI	Ab2 / B2	95-150	-

\* Level 7 encountered top of Stratum IV in the north edge at 68 cm; Level 8 removed the remainder of Stratum III in the southern two-thirds of the unit; Level 9 was the first level in Stratum IV.

TU 2 was placed approximately 0.5 m west of STP A-01 and also about 1.5 m west of the top of bank. Soils in TU 2 were nearly identical to those in TU-1 except that the upper 50 cm in TU-2 did not exhibit a distinct break into two A-horizons (**Figure 5**), although the overall depth was similar to that in TU 1. Soils in TU 2 included two A-horizons (Strata I-II, similar to Strata I and III in TU 1), a B-horizon (Stratum III, similar to Stratum IV in TU 1), a thin Ab-horizon (Stratum IV, similar to Stratum V in TU 1), and a second B-horizon (Stratum V, similar to Stratum VI in TU 1). Excavation levels 1-5 were excavated through the first stratum; level 6 was excavated through the Ab horizon; level 7 was excavated into the B horizon. Below level 7 an approximately 50-cm-square STP-like excavation was extended to a total depth of 150 cm bgs, encountering Strata IV (Ab horizon) and V (B-horizon).

**Table 3** provides field counts for the artifacts recovered from TU 2. In general, the first four levels in Stratum I produced both historic and prehistoric items, and level 5 of Stratum I produced only prehistoric items. Level 6 in the Ab horizon produced five prehistoric items from a disturbed corner of the unit (heavy roots) with the level and stratum largely sterile. Level 7 as well as the underlying soils in the STP were sterile, with the exception of a few fragments of plastic wrapper and Styrofoam from a rodent disturbance in Stratum V.



**Figure 5. Close Up Photograph of East Profile in TU 2.**

**Table 3. Artifacts from TU 2 by Level and Stratum.**

Level	Stratum	Horizon	Depth	Artifacts
1	I	Ap	0-12	12+ glass and hist ceramic; 1 FCR
2	I	Ap	12-22	12+ glass and hist ceramic
3	I	Ap	22-32	12+ glass and hist ceramic; 1 FCR
4	I	Ap	32-42	12+ glass and hist ceramic; 1 chert flake
5	I	Ap	42-52	1 FCR
6	II	Ab	52-63	5 flakes (from root disturbance in SE corner of unit)
7	III	B	63-77	-
STP	IV/V	Ab / B	77-150	Plastic and Styrofoam from rodent disturbance in V

*Feature 1 (TU 1).* As noted above, one potentially cultural feature was identified in STP C-01-RN that was further investigated through the excavation of TU 1. Based on the TU 1 results, Feature 1 consists of a small cluster of rocks and FCR located within the top 10 cm of the B horizon (Stratum IV in TU 1), at a depth of roughly 82-86 cm bgs (**Figure 6**). (Note: Stratum IV was encountered at 68 cm in the north

end of the TU and 85 cm at the south end of TU 1; but where Feature 1 was located, the top of Stratum IV was approximately 80 cm and Feature 1 itself was present from about 82 cm to 86 cm.)

Feature 1 manifest itself as a small cluster of FCR and rocks. The bulk of the cluster was approximately 40 cm north-south by 25 cm east-west. A few other FCR were located to the southeast, southwest, and north of the main cluster.



**Figure 6. Photograph of Feature 1 at A09.117.000155 (north to left, red ticks = 10cm increments).**

Feature 1 showed no evidence of burning or fire—i.e., no charcoal in the soil, no fire reddening of the soil, and no concretion of the soil due to heat. Further, no artifacts were found around, above, or below Feature 1. After photographing and scale drawing the cluster, the rocks and FCR from Feature 1 were bagged and all soil from between the rocks was retained as a soil sample for floatation or other purposes.

It is difficult to determine the function of Feature 1, as well as its cultural or non-cultural nature. Most of the stones in the cluster are clearly fire-cracked, and it is unlikely this could have occurred through natural processes (e.g., forest fire). Therefore, we believe that the items were fire-cracked through human intervention. However, the lack of other cultural materials in, around, above, and below the cluster is perplexing. The same can be said about the lack of any evidence of fire such as charcoal and/or reddened/concreted soils.

There are several possibilities regarding the function of Feature 1:

- Feature 1 may represent an old hearth from which any organic materials has leached out of the sandy soils due to time, coarse sediment, and acidic soil conditions. We believe that this is the least likely explanation of the function of Feature 1.
- Feature 1 may represent a location where cracked stones used for stone boiling (i.e., food preparation/cooking) were dumped once they passed their usefulness. This hypothesis would account for the lack of burning evidence such as charcoal and/or altered soils. However, this hypothesis does not explain the lack of other cultural materials. It is possible other materials are present at that depth, and that the relatively small sample offered in a 1m-by-2m TU simply missed them.
- Finally, Feature 1 may represent the final redeposited location of the FCR due to bioturbation such as a rodent or groundhog burrow. The items may have tumbled down from a higher/shallower depth into a rodent disturbance which subsequently infilled. This hypothesis also accounts for the lack of charcoal and other evidence of burning. But like the stone-boiling hypothesis, this one does not account for the lack of other cultural materials, since such items most likely would have also infilled into the rodent burrow.

Ultimately, our interpretation of Feature 1 is that it represents a cluster of cultural FCR whose exact function and mode of disposition into the B-horizon cannot be determined based on the available data.

## Discussion

Although analysis of artifacts and other data is just beginning, we can make a few comments on the results of the work at site A09.117.000155.

First, site A09.117.000155 has produced historic artifacts from disturbed contexts. Berger speculated that the historic component of the site might have been the result of redeposition “by ‘nightsoiling’ or fertilizing agricultural fields with waste removed from privies, redepositing any artifacts that may have been transported with the waste” (Penney et al. 2013:86). Berger also suggested that the historic component might be the result of “some undocumented, non-residential structure, such as a small barn or shed” (*ibid.*). While URS’s current work does not disprove these hypotheses, we believe that the quantity and types of historic artifacts suggest a more substantial historic occupation during the nineteenth, or even early twentieth, century. The “nightsoiling” hypothesis does not seem to be corroborated by the quantity of artifacts recovered. Likewise, given the quantity of household glass and ceramic artifacts recovered, we do not believe that this site represents a non-residential barn or shed. We believe that the historic component of site A09.117.000155 likely represents a primary, but disturbed, deposition of historic items related to a short-term domestic structure not depicted on nineteenth or twentieth century maps (i.e., a structure that was built, used, and abandoned between significant mapping efforts).

Second, site A09.117.000155 has produced prehistoric artifacts from seemingly undisturbed contexts. Berger indicated that soils at the site consisted of one or two plowzones overlying a B-horizon (Penney et al. 2013:86). Photographs and scale drawings of mechanical trenches presented in Penney et al.

Figures 41-43, Photographs 27-31) indicate that this statement refers to a lighter-colored soil in the upper 50 cm of the soil profile and a much darker underlying stratum. Our work, however, indicates that this stratigraphic package consists of three A horizons with the upper horizon approximately 40 cm bgs having been subjected to plowing disturbances. Evidence of plowing, even in the location of TU 2, comes from the presence of a mix of prehistoric and historic artifacts. However, in both TUs, historic artifact recovery ended at approximately 40 cm bgs while the bottom 20 cm or so of the upper lighter stratum contained prehistoric items only, indicating that this lower portion of the upper lighter-colored soil is intact and undisturbed. Finally, the deeper and darker stratum was sterile of cultural materials (except for a few items that we interpret as the result of bioturbation). Therefore, we believe that the site exhibits a disturbed plowzone (Ap-horizon) to a depth of approximately 40 cm bgs, under which is an intact buried A-horizon (Ab1-horizon) that contains intact cultural materials and extends to 60 cm bgs, and finally, a third layer which is a culturally sterile buried A-horizon (Ab2-horizon).

### **Conclusions and Recommendations**

We believe that the historic component of site A09.117.000155 does not meet the criteria for eligibility for the National Register of Historic Places (NRHP). The historic component does not exhibit a variety or quantity of materials. There appears to be no clarity and integrity to the historic archaeological deposits, as evidenced by the recovery of these items from disturbed plowzone contexts coupled with a lack of identifying any historic features. Finally, the historic component cannot be placed into a larger context due to a lack of adequate historic resources coupled with recovery of many items that were produced well into the 20<sup>th</sup> century (and are still produced in the present). Without intact deposits, additional work on the historic component of the site cannot significantly add to our understanding of 19<sup>th</sup>- or 20<sup>th</sup>-century lifeways.

Conversely, the prehistoric component of the site has been documented in seemingly undisturbed contexts. Recovered items including lithic debitage, lithic tools, prehistoric ceramics, and FCR provide a variety of prehistoric materials. Including data from Berger's work, a large quantity of prehistoric items has been recovered from the site. The seemingly undisturbed buried Ab1-horizon indicates that the prehistoric component may have clarity and integrity to its deposits; and it is possible that Feature 1 also provides evidence of clarity and integrity, although that is equivocal at this time. Finally, with the presence of prehistoric ceramics and potentially other temporally diagnostic artifacts, it is likely that the prehistoric component of the site can be placed into a larger context and compared and contrasted to other sites from the region. Taken in concert, these lines of evidence indicate that the prehistoric component of A09.117.000155 could potentially meet the eligibility criteria for the NRHP by adding to our understanding of prehistoric lifeways in the region. We therefore recommend that measures be taken to avoid impacts to the site during dredging activities by treating the area as a Sensitive Archaeological Shoreline as described in Dredging Specification 01353 (Cultural Resources).

## References

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